

PATENT SPECIFICATION (11)

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(54) FIRE ESCAPE

(71) I, SECRETARY OF STATE FOR DEFENCE, LONDON, do hereby declare the invention, for which I pray that a patent may be granted to me, and the method by which it is to be performed, to be particularly described in and by the following statement:—

The present invention relates to fire escapes, especially to portable or collapsible fire escapes.

A fire escape according to the present invention comprises a plurality of platforms successively attached by flexible linking means and each having an aperture through which a human being can pass, the arrangement being such that when the escape is deployed, the platforms are such a distance apart that a person can readily lower himself from one stage to the next, and the aperture in any one platform does not overlie the aperture in the next.

Preferably the area of each aperture is about $\frac{1}{4}$ that of the platform as a whole, and the aperture in any one platform is in a diametrically opposite position to that in the next. The platforms may be of any shape, ostensibly (that is to say including the aperture) square or circular being preferred.

According to features of the invention each platform may be made of fabric (preferably flameproof) supported on a hoop, the platforms may be linked flexibly by a chain, wire or rope (preferably reinforced for example by carbon fibre) so that they can be suspended one beneath another, and condensed together for storage. The whole may be enclosed in a flameproof flexible sheet material housing which may be translucent or transparent, and/or lights may be provided to illuminate each stage. Ropes may be provided depending from one platform into the aperture in the next, and the hoops may be made, for example, of steel, carbon fibre reinforced plastic or glass fibre

reinforced plastic.

A suitable housing material may be a high temperature polyimide film.

A preferred fire escape in accordance with the invention can thus be collapsible and stowable, light in weight and portable on fire tenders.

A preferred embodiment of the invention will now be described by way of example with reference to the drawing accompanying the provisional specification, a diagrammatic side view in perspective of the fire escape.

As shown in the drawing the fire escape has a plurality of platforms (1) linked by 4 wires (2) so that they are suspended one beneath another. Each platform comprises a flameproof fabric floor (3) supported on a hoop (4), there being an aperture (5) in between the fabric and the hoop through which a human being can pass. The platforms are mounted so that none has its aperture (5) above that of the next. Ropes (6) depend from each platform into the aperture of the next. A housing (7) made of high temperature polyimide film substantially surrounds the escape and is attached to each hoop. It carries a beta-light strip (8). The housing thus protects users from debris, flames and heat, and weather but permits access to each platform.

The fire escape may be suspended from a building or fireman's ladder. The user may thus sit on a platform and allow himself to fall or be pushed or lifted through the aperture to the platform below and may use the rope (6) for aid. He then turns to negotiate the next fall. In a practicable escape the diameter of each stage may be 2½ to 5 feet, preferably about 4 feet, and the distance apart of each platform about 40 to 44 inches. The smaller axis of an aperture (5) would measure about 20 to 25 inches. With wires (2) having an ultimate tensile strength of about 2000 lb, such a fire escape would be capable of taking 10 or

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more people in line at a time, and be collapsible to about 5 inches for every 20 feet of length.

WHAT I CLAIM IS:—

- 5 1. A fire escape comprising a plurality of
platforms successively attached by flexible
linking means each having an aperture
through which a human being can pass, the
arrangement being such that when the
10 escape is deployed, the platforms are such
a distance apart that a person can readily
lower himself from one platform to the next,
and the aperture in any one platform does
not overlie the aperture in the next.
15 2. A fire escape according to claim 1 and
wherein the area of each aperture is about
 $\frac{1}{4}$ that of the platform as a whole.
3. A fire escape according to claim 1 or
claim 2 and wherein the aperture in any one
20 platform is in a diametrically opposite
position to that in the next.
4. A fire escape according to any one
of claims 1 to 3 and wherein the platforms
are ostensibly circular.
25 5. A fire escape according to claim 4 and
wherein each platform is made of a fabric

supported on a hoop.

6. A fire escape according to any one of
the preceding claims and having suspension
means whereby it can be suspended. 30

7. A fire escape according to any one of
the preceding claims and enclosed in a
flameproof flexible sheet material.

8. A fire escape according to claim 7 and
wherein the material is a high temperature 35
polyimide film.

9. A fire escape according to claim 7 or
claim 8 and wherein the material is
translucent.

10. A fire escape according to any one
of the preceding claims and having lights
illuminating each platform. 40

11. A fire escape according to any one
of the preceding claims and having a rope
depending from one platform into the 45
aperture of the next.

12. A fire escape substantially as herein-
before described with reference to the
drawing accompanying the provisional
specification. 50

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